

AMENDMENTS TO THE CLAIMS

1 1. (Withdrawn) A method of generating a plurality of custom browse
2 hierarchies each representative of a unique subset of items, said method comprising:
3 for each leaf node of a primary hierarchy representative of the items:
4 establishing a search rule that comprises an aggregation of constraints specified
5 by the leaf node and its ancestors; and
6 identifying all of the unique subsets that contain at least one of the items meeting
7 the aggregation of constraints; and
8 creating a custom browse hierarchy for each of the unique subsets, said creating
9 further comprising retaining in the custom browse hierarchy only those
10 leaf nodes, and their ancestors, from the primary hierarchy for which the
11 unique subset has been identified by said identifying.

1 2. (Withdrawn) The method of Claim 1 wherein each of the unique subsets are
2 identified by a different subset ID, each of the items are stored in a database and each of the
3 items comprising each of the unique subsets is stored in an entry of a subset ID table, the entry
4 further containing the subset ID that identifies the unique subset to which the item belongs, said
5 identifying further comprising:
6 executing a search of the database to identify each of the items in the database that meet
7 the constraints; and
8 for each of the items identified by said executing a search, performing a table join
9 between the identified item and the subset ID table to return a list of all subset
10 IDs that are stored in an entry of the subset ID table with the identified item.

1 3. (Withdrawn) The method of Claim 2 wherein said retaining further comprises:
2 for each leaf node of the primary hierarchy:
3 locating a next unprocessed leaf node of the primary hierarchy;
4 retrieving the returned list of all subset IDs for the next unprocessed leaf node; and
5 cloning the next unprocessed leaf node and its ancestors into the custom browse
6 hierarchy if the subset ID identifying the unique subset is contained in the
7 returned list of all subset IDs for the unprocessed leaf node.

1 4. (Withdrawn) The method of Claim 2 wherein said executing a search further
2 comprises:
3 translating the search rule to a database query;
4 issuing the database query to a database server coupled to the database; and
5 wherein the database server executes the search and performs the table join in accordance
6 with the database query.

1 5. (Withdrawn) The method of Claim 4 wherein said translating the search rule to a
2 database query is performed by an application program being executed on an application server.

1 6. (Withdrawn) The method of Claim 2 wherein the items are products or services,
2 and the items are represented by catalog data stored in the database, the catalog data comprising
3 a unique product identifier, one or more attributes, a unique value for each of the attributes, and
4 associated descriptive information.

1 7. (Withdrawn) The method of Claim 1 wherein each of the unique subsets of
2 items comprises a custom catalog, and wherein the custom browse hierarchy generated for each
3 of the unique subsets is operable to browse the custom catalog.

1 8. (Withdrawn) The method of Claim 2 wherein said creating further comprises
2 identifying each custom browse hierarchy with the subset ID used to identify the unique subset
3 for which the custom browse hierarchy identified by the subset ID for display on a terminal
4 having access to the database in response to a request identified by the subset ID.

1 9. (Withdrawn) The method of Claim 8 wherein said providing further comprises:
2 formatting the created custom browse hierarchy as one or more web pages; and
3 transmitting the web pages over the Internet for display on the terminal using a web
4 browser.

1 10. (Withdrawn) The method of Claim 8 further comprising:
2 formatting one or more copies of the created custom browse hierarchy; and
3 exporting each formatted copy to an entity associated with the subset ID.

11. (Currently amended) ~~An apparatus~~ A method for generating, from a
primary hierarchy of items, a plurality of custom browse hierarchies ~~from~~ for unique
subsets ~~of the items in the primary hierarchy, wherein each unique subset contains at least~~
~~one item from a set of items, said method comprising: for each leaf node of a primary-~~
~~hierarchy, wherein the primary hierarchy is at least coextensive with the plurality of~~
~~custom browse hierarchies, wherein~~ the primary hierarchy comprises leaf nodes and
~~ancestors one or more ancestor nodes of one or more of the leaf nodes, each leaf node~~
defines a set of one or more items that ~~meet~~ meets constraints of ~~each~~ the leaf node and
each ancestor node, if any, of the leaf node, and the constraints of each leaf node and
each ancestor node, if any, of the leaf node comprise one or more attribute names[[.]] and
one or more attribute values, ~~and one or more associated operators~~ the method
comprising:

for each custom browse hierarchy:

~~means for~~ establishing a search rule set of rules for the primary hierarchy,
wherein each rule in the set of rules is associated with one of the
leaf nodes and each ancestor node, if any, of the leaf node, and
each rule that comprises an aggregation of constraints specified by
the leaf node and ~~all ancestor nodes~~ each ancestor node, if any, of
the leaf node, wherein the constraints of each leaf node and each
ancestor node, if any, of the leaf node in the aggregation of
constraints are logically ANDed together; ~~and~~

~~means for identifying all of the unique subsets that contain at least one of~~
~~the items meeting the aggregation of constraints, wherein each~~
~~subset is associated with at least one rule, each rule specifies a set~~
~~of one or more constraints, and each item that meets the constraints~~
~~of at least one rule associated with a subset is contained in the~~
~~subset; and~~

identifying a rule subset of the set of rules, wherein each rule in the rule
subset has constraints that are met by at least one of the items in
the unique subset of items;

for each leaf node in the primary hierarchy, including the leaf node from
the primary hierarchy in the custom browse hierarchy if the rule

associated with the leaf node is included in the subset of rules and
excluding the leaf node from the custom browse hierarchy if the
rule associated with the leaf node is not included in the subset of
rules; and
for each ancestor node in the primary hierarchy, including the ancestor
node from the primary hierarchy if at least one leaf node of the
ancestor node is included in the custom browse hierarchy and
otherwise excluding the ancestor node from the custom browse
hierarchy;
wherein the custom browse hierarchy is represented by all the included
leaf nodes and included ancestor nodes, if any, of the primary
hierarchy and the custom browse hierarchy represents a pared
version of the primary hierarchy.
means for creating a custom browse hierarchy for each of the unique subsets, said
means for creating further comprising means for retaining in the custom
browse hierarchy only those leaf nodes, and the ancestor nodes of the leaf
nodes, from the primary hierarchy for which at least one of the unique
subsets has been identified by said identifying means.

12. (Currently amended) The apparatus method of Claim 11 wherein, for each
custom browse hierarchy, each of the unique subsets are item in the unique subset of items for
the custom browse hierarchy is identified by a different subset ID in a subset ID table and
associated with each rule met by the item, each of the items are is stored in a database, and and
each of the items comprising each of the unique subsets is stored in an entry of a subset ID table,
the entry further containing the subset ID that identifies the unique subset to which the item
belongs; said means for identifying including the leaf node from the primary hierarchy in the
custom browse hierarchy if the rule associated with the leaf node is included in the subset of
rules and excluding the leaf node from the custom browse hierarchy if the rule associated with
the leaf node is not included in the subset of rules further comprising comprises:
means for executing a search searching of the database to identify each of the items in the
database that meets the constraints of at least one rule; and

for each of the items identified by ~~said executing a search~~ searching the database, ~~means~~
for performing a table join between the identified item and the subset ID table to
return a list of all subset IDs that are stored in an entry of the subset ID table with
the identified item; and
including the leaf node from the primary hierarchy in the custom browse hierarchy if the
rule associated with the leaf node is identified in the subset ID table and excluding
the leaf node from the custom browse hierarchy if the rule associated with the leaf
node is not identified in the subset ID table.

13. (Withdrawn) The apparatus of Claim 12 wherein said means for retaining further
comprises:

for each leaf node of the primary hierarchy:

means for locating a next unprocessed leaf node of the primary hierarchy;
means for retrieving the returned list of all subset IDs for the next unprocessed leaf node;
and
means for cloning the next unprocessed leaf node and its ancestors into the custom
browse hierarchy if the subset ID identifying the unique subset is contained in the
returned list of all subset IDs for the unprocessed leaf node.

14. (Currently amended) The ~~apparatus~~ method of Claim 12 wherein ~~said means for~~
~~executing a search~~ searching the database further comprises:

~~means for~~ translating the ~~search~~ cache rule to a database query;
~~means for~~ issuing the database query to a database server coupled to the database; and
wherein the database server executes the search and performs the table join in accordance
with the database query.

15. (Currently amended) The ~~apparatus~~ method of Claim 14 wherein ~~said means for~~
translating the search rule to a database query is performed by an application program being
executed on an application server.

16. (Withdrawn) The apparatus of Claim 12 wherein the items are products or
services, and the items are represented by catalog data stored in the database, the catalog data

3 comprising a unique product identifier, one or more attributes, a unique value for each of the
4 attributes, and associated descriptive information.

1 17. (Withdrawn) The apparatus of Claim 11 wherein each of the unique subsets of
2 items comprises a custom catalog, and wherein the custom browse hierarchy generated for each
3 of the unique subsets is operable to browse the custom catalog.

1 18. (Withdrawn) The apparatus of Claim 12 wherein said means for creating further
2 comprises means for identifying each custom browse hierarchy with the subset ID used to
3 identify the unique subset for which the custom browse hierarchy is created, said apparatus
4 further comprising:

5 means for providing the custom browse hierarchy identified by the subset ID for display
6 on a terminal having access to the database in response to a request identified by
7 the subset ID.

1 19. (Withdrawn) The apparatus of Claim 18 wherein said means for providing
2 further comprises:

3 means for formatting the created custom browse hierarchy as one or more web pages; and
4 means for transmitting the web pages over the Internet for display on the terminal using a
5 web browser.

1 20. (Withdrawn) The apparatus of Claim 18 further comprising:
2 means for formatting one or more copies of the created custom browse hierarchy; and
3 means for exporting each formatted copy to an entity associated with the subset ID.

1 21. (Currently amended) A computer program product for generating, from a
2 primary hierarchy of items, a plurality of custom browse hierarchies ~~from~~ for unique
3 subsets of the items in the primary hierarchy, wherein the primary hierarchy comprises
4 leaf nodes and one or more ancestor nodes of one or more of the leaf nodes, each leaf
5 node defines a set of one or more items that meets constraints of the leaf node and each
6 ancestor node, if any, of the leaf node, and the constraints of each leaf node and each
7 ancestor node, if any, of the leaf node comprise one or more attribute names and one or

~~more attribute values, wherein each unique subset contains at least one item from a set of~~
~~items,~~ said computer program product comprising:

a computer-readable storage medium; and

program instructions stored on said storage medium for:

~~for each leaf node of a primary hierarchy, wherein the primary hierarchy is at~~
~~least coextensive with the plurality of custom browse hierarchies, the~~
~~primary hierarchy comprises leaf nodes and ancestors of leaf nodes, each~~
~~node defines a set of items that meet constraints of each node, and the~~
~~constraints of each node comprise one or more attribute names, one or~~
~~more attribute values, and one or more associated operators:~~

establishing a search rule set of rules for the primary hierarchy, wherein each rule
in the set of rules is associated with one of the leaf nodes and each
ancestor node, if any, of the leaf node, and each rule that comprises an
aggregation of constraints specified by the leaf node and ~~all ancestor~~
~~nodes~~ each ancestor node, if any, of the leaf node, wherein the constraints
of each leaf node and each ancestor node, if any, of the leaf node in the
aggregation of constraints are logically ANDed together;

identifying a rule subset of the set of rules, wherein each rule in the rule
subset has constraints that are met by at least one of the items in
the unique subset of items;

for each leaf node in the primary hierarchy, including the leaf node from
the primary hierarchy in the custom browse hierarchy if the rule
associated with the leaf node is included in the subset of rules and
excluding the leaf node from the custom browse hierarchy if the
rule associated with the leaf node is not included in the subset of
rules; and

for each ancestor node in the primary hierarchy, including the ancestor
node from the primary hierarchy if at least one leaf node of the
ancestor node is included in the custom browse hierarchy and
otherwise excluding the ancestor node from the custom browse
hierarchy;

39 wherein the custom browse hierarchy is represented by all the included
40 leaf nodes and included ancestor nodes, if any, of the primary
41 hierarchy and the custom browse hierarchy represents a pared
42 version of the primary hierarchy.

43 ~~identifying all of the unique subsets that contain at least one of the items meeting~~
44 ~~the aggregation of constraints, wherein each subset is associated with at~~
45 ~~least one rule, each rule specifies a set of one or more constraints, and~~
46 ~~each item that meets the constraints of at least one rule associated with a~~
47 ~~subset is contained in the subset; and~~

48 ~~creating a custom browse hierarchy for each of the unique subsets, said creating~~
49 ~~further comprising retaining in the custom browse hierarchy only those~~
50 ~~leaf nodes, and the ancestor nodes of the leaf nodes, from the primary~~
51 ~~hierarchy for which at least one of the unique subsets has been identified~~
52 ~~by said identifying.~~

1 22. (Currently amended) The computer program product of Claim 21 wherein, for
2 each custom browse hierarchy, each of the unique subsets are item in the unique subset of items
3 for the custom browse hierarchy is identified by a different subset ID in a subset ID table and
4 associated with each rule met by the item, each of the items are is stored in a database, and and
5 each of the items comprising each of the unique subsets is stored in an entry of a subset ID table,
6 the entry further containing the subset ID that identifies the unique subset to which the item
7 belongs; said program instructions for including the leaf node from the primary hierarchy in the
8 custom browse hierarchy if the rule associated with the leaf node is included in the subset of
9 rules and excluding the leaf node from the custom browse hierarchy if the rule associated with
10 the leaf node is not included in the subset of rules comprise instructions further for:

11 executing a search of the database to identify each of the items in the database that meet
12 the constraints of at least one rule; and

13 for each of the items identified by said executing a search, performing a table join
14 between the identified item and the subset ID table to return a list of all subset IDs
15 that are stored in an entry of the subset ID table with the identified item; and
16 including the leaf node from the primary hierarchy in the custom browse hierarchy if the
17 rule associated with the leaf node is identified in the subset ID table and excluding

18 the leaf node from the custom browse hierarchy if the rule associated with the leaf
19 node is not identified in the subset ID table.

1 23. (Withdrawn) The computer program product of Claim 22 wherein said program
2 instructions are further for:
3 for each leaf node of the primary hierarchy:
4 locating a next unprocessed leaf node of the primary hierarchy;
5 retrieving the returned list of all subset IDs for the next unprocessed leaf node; and
6 cloning the next unprocessed leaf node and its ancestors into the custom browse
7 hierarchy if the subset ID identifying the unique subset is contained in the
8 returned list of all subset IDs for the unprocessed leaf node.

1 24. (Currently amended) The computer program product of Claim 22 wherein said
2 program instructions are further for:
3 translating ~~the search~~ each rule to a database query;
4 issuing the database query to a database server coupled to the database; and
5 wherein the database server executes the search and performs the table join in accordance
6 with the database query.

1 25. (Original) The computer program product of Claim 24 wherein said program
2 instructions for translating the search rule to a database query comprise an application program
3 being executed on an application server.

1 26. (Withdrawn) The computer program product of Claim 22 wherein the items are
2 products or services, and the items are represented by catalog data stored in the database, the
3 catalog data comprising a unique product identifier, one or more attributes, a unique value for
4 each of the attributes, and associated descriptive information.

1 27. (Withdrawn) The computer program product of Claim 21 wherein each of the
2 unique subsets of items comprises a custom catalog, and wherein the custom browse hierarchy
3 generated for each of the unique subsets is operable to browse the custom catalog.

1 28. (Withdrawn) The computer program product of Claim 22 wherein said program
2 instructions are further for identifying each custom browse hierarchy with the subset ID used to
3 identify the unique subset for which the custom browse hierarchy is created, said program
4 instructions further for:
5 providing the custom browse hierarchy identified by the subset ID for display on a
6 terminal having access to the database in response to a request identified by the
7 subset ID.

1 29. (Withdrawn) The computer program product of Claim 28 wherein said program
2 instructions are further for:
3 formatting the created custom browse hierarchy as one or more web pages; and
4 transmitting the web pages over the Internet for display on the terminal using a web
5 browser.

1 30. (Withdrawn) The computer program product of Claim 28 further comprising
2 program instructions for:
3 formatting one or more copies of the created custom browse hierarchy; and
4 exporting each formatted copy to an entity associated with the subset ID.

1 31. (Withdrawn) A computer system for generating a plurality of custom browse
2 hierarchies each representative of a unique subset of items, said computer system comprising:
3 a memory means for storing program instructions for:
4 for each leaf node of a primary hierarchy representative of the items:
5 establishing a search rule that comprises an aggregation of constraints specified
6 by the leaf node and its ancestors; and
7 identifying all of the unique subsets that contain at least one of the items meeting
8 the aggregation of constraints; and
9 creating a custom browse hierarchy for each of the unique subsets, said creating
10 further comprising retaining in the custom browse hierarchy only those
11 leaf nodes, and their ancestors, from the primary hierarchy for which the
12 unique subset has been identified by said identifying; and
13 means for processing said program instructions.

1 32. (Withdrawn) The computer system of Claim 31 wherein each of the unique
2 subsets are identified by a different subset ID, each of the items are stored in a database and each
3 of the items comprising each of the unique subsets is stored in an entry of a subset ID table, the
4 entry further containing the subset ID that identifies the unique subset to which the item belongs,
5 said program instructions further for:

6 executing a search of the database to identify each of the items in the database that meet
7 the constraints; and

8 for each of the items identified by said executing a search, performing a table join
9 between the identified item and the subset ID table to return a list of all subset IDs
10 that are stored in an entry of the subset ID table with the identified item.

1 33. (Withdrawn) The computer system of Claim 32 wherein said program
2 instructions are further for:

3 for each leaf node of the primary hierarchy:

4 locating a next unprocessed leaf node of the primary hierarchy;

5 retrieving the returned list of all subset IDs for the next unprocessed leaf node; and

6 cloning the next unprocessed leaf node and its ancestors into the custom browse
7 hierarchy if the subset ID identifying the unique subset is contained in the
8 returned list of all subset IDs for the unprocessed leaf node.

1 34. (Withdrawn) A custom browse hierarchy representative of a unique subset of
2 items, said custom browse hierarchy generated by:

3 for each leaf node of a primary hierarchy representative of the items:

4 establishing a search rule that comprises an aggregation of constraints specified
5 by the leaf node and its ancestors; and

6 identifying all of the unique subsets that contain at least one of the items meeting
7 the aggregation of constraints; and

8 creating a custom browse hierarchy for the unique subset, said creating further
9 comprising retaining in the custom browse hierarchy only those leaf
10 nodes, and their ancestors, from the primary hierarchy for which the
11 unique subset has been identified by said identifying.

1 35. (Withdrawn) The custom browse hierarchy of Claim 34 wherein the unique
2 subset is identified by a unique subset ID, each of the items is stored in a database and each of
3 the items comprising the unique subset is stored in an entry of a subset ID table, the entry further
4 containing the subset ID that identifies the unique subset, said identifying further comprising:
5 executing a search of the database to identify each of the items in the database that meet
6 the constraints; and
7 for each of the items identified by said executing a search, performing a table join
8 between the identified item and the subset ID table to return a list of all subset IDs
9 that are stored in an entry of the subset ID table with the identified item.

1 36. (Withdrawn) The custom browse hierarchy of Claim 35 wherein said retaining
2 further comprises:
3 for each leaf node of the primary hierarchy:
4 locating a next unprocessed leaf node of the primary hierarchy;
5 retrieving the returned list of all subset IDs for the next unprocessed leaf node; and
6 cloning the next unprocessed leaf node and its ancestors into the custom browse
7 hierarchy if the subset ID identifying the unique subset is contained in the
8 returned list of all subset IDs for the unprocessed leaf node.